

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application:

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Listing of Claims:

1. (Currently amended) A method for removing oxygen contaminants from ammonia contaminated with oxygen, said method comprising the steps of contacting the oxygen contaminated ammonia with [[a]] an oxygen removing material consisting essentially of at least partially-reduced oxides of iron and manganese to sorb said oxygen contaminants from said contaminated ammonia.

2.-68. (Cancelled)

69. (Original) A method for removing oxygen from ammonia comprising the steps of:
thermally reducing hydroxides of iron and manganese to produces oxides of iron and manganese;

reducing said oxides of iron and manganese to produce an ammonia purification material, such that said purification material includes at least partially-reduced oxides of iron and manganese;

removing oxygen from an oxygen-contaminated ammonia stream with said purification material of iron and manganese, by contacting ammonia with said purification material, said removing step performed at less than 50C and greater than -20C.

70. (Original) The method as recited in claim 69, further comprising a pretreatment step of adding zeolites.

71. (Currently Amended) The method as recited in claim 69, wherein said reducing step takes place between about 200 and 400 degrees C.

72. (Currently Amended) The method as recited in claim 69, where said thermally reducing step takes place at about 350 degrees C.

73. (Original) The method as recited in claim 69, further comprising the act of pre-treating salts of iron and manganese to produce hydroxides of iron and manganese.

74. (Cancelled)

75. (New) The method as recited in claim 1, further comprising providing a zeolite material in contact with said oxygen removing material.

76. (New) The method as recited in claim 1, further comprising thermally reducing hydroxides of iron and manganese to produces oxides of iron and manganese at between about 200 and 400 degrees C.

77. (New) The method as recited in claim 1, further comprising thermally reducing hydroxides of iron and manganese to produces oxides of iron and manganese at about 350 degrees C.

78. (New) The method as recited in claim 1, further comprising the act of pre-treating salts of iron and manganese to produce hydroxides of iron and manganese.

79. (New) A method comprising:
providing a getter material comprising iron and manganese;
flowing a gaseous stream comprising ammonia over the getter material;

gettering at least oxygen contaminants from the stream of ammonia with the getter material, without substantially gettering the ammonia.

80. (New) The method of claim 79, further comprising:
producing oxides of iron and manganese; and
at least partially reducing the oxides of iron and manganese.

81. (New) The method of claim 79, further comprising creating the getter material, wherein said producing oxides of iron and manganese includes thermally reducing hydroxides of iron and manganese at between about 200 and 400 degrees C.

82. (New) The method of claim 79, further comprising providing zeolites in contact with said getter material.

83. (New) The method of claim 79, further comprising pre-treating salts of iron and manganese to produce hydroxides of iron and manganese.

84. (New) The method of claim 79, wherein after gettering oxygen from the stream of gaseous ammonia, there is less than about 1 ppm of oxygen in said ammonia gas.

85. (New) The method of claim 79, wherein after gettering oxygen from the stream of gaseous ammonia, there is less than about 1 ppb of oxygen in said ammonia gas.

86. (New) The method of claim 79, wherein after gettering oxygen from the stream of gaseous ammonia, there is less than about 1% of oxygen in said ammonia gas.

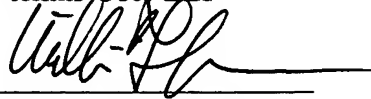
87. (New) The method of claim 79, wherein said gettering oxygen from the stream of gaseous ammonia includes contacting the stream of gas with the getter material.

88. (New) The method of claim 79, wherein the getter material has an operational temperature of at least between about -20 and 50 degrees C.

89. (New) The method of claim 79, further comprising flowing the stream of gaseous ammonia over a dryer material.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is encouraged to call the undersigned at (650) 838-4305.

Respectfully submitted,
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Date: March 18, 2005

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